

**MODIFYING ROBUST VOCABULARY
INSTRUCTION FOR THE BENEFIT OF
LOW-SOCIOECONOMIC STUDENTS**

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Researchers have long acknowledged the important role that vocabulary plays in assisting reading comprehension. Because of the importance of vocabulary, it is necessary to determine how to ensure that all students are making adequate vocabulary gains. The research base for the best ways to instruct students in robust vocabulary is strong. The purpose of this study was to determine the necessary amount of robust instruction for students from low socioeconomic backgrounds to make vocabulary gains. The results of the study indicated that additional instruction was beneficial for all students who received it. There are several implications for classroom practice. The conventional wisdom that all students do not learn in the same way may have limited the notion that some students need more of the same. Therefore, teachers must be prepared to provide additional vocabulary instruction for students who do not master the taught words at the conclusion of initial instruction.

Research into the best ways to teach students robust vocabulary has resulted in instructional techniques that are beneficial to students. Rich instruction includes utilizing questioning, providing brief explanations, pointing, clarifying and repeating, when teaching higher level vocabulary to promote vocabulary development. There is agreement by many researchers that for students to have the best chance of achieving ownership of a word the instructional encounters provided students must be rich, interactive, and multi-faceted. Researchers working to increase the vocabularies of young children have utilized trade books read aloud to students to introduce, define and discuss target words (Beck & McKeown, & Kucan, 2005; Brett, Rothlein, & Hurley, 1996; Coyne, Simmons, Kame'enui, & Stoolmiller, 2004; Penno, Wilkinson, & Moore, 2002). Coupled with the use of

trade books, researchers also advocate active involvement on the part of the learner. Several studies have shown that when students are active participants in vocabulary instruction more vocabulary words are learned (Hargrave & Senecahl, 2000; Penno, Wilkinson, & Moore, 2002; Senechal, Thomas, & Monker, 1995).

The research on best instructional methods for teaching robust vocabulary are thorough and the studies have shown that the instructional methods are effective (Beck & McKeown, 2001; Beck, McKeown, & Kucan, 2005; Brett, Rothlein, & Hurley, 1996; Coyne, Simmons, Kame'enui, & Stoolmiller, 2004; Stahl & Nagy, 2006). The issue that remains is how to utilize research-based robust vocabulary instruction effectively for students from low-socioeconomic backgrounds. The issue of children from families on welfare or near the poverty line having a

limited vocabulary, in comparison to their peers from higher socioeconomic households, is often referenced. The available studies provide insight into the causes of children's vocabulary level development and suggest a set of variables that work together to either positively or negatively affect a child's vocabulary level. The differences in vocabulary levels of children from different socioeconomic backgrounds have been detected as early as when children are toddlers (Beck, McKeown, & Kucan, 2005; Hart & Risley, 1995).

Throughout reading research many references are made to the issue of limited vocabulary knowledge of children from poverty or near poverty homes. In the *Handbook of Reading Research* (2000), there is discussion that the vocabularies of high and low ability learners show huge differences and the differences can be attributed to socioeconomic level. For example, the vocabulary level of children in first grade from high socioeconomic families was about twice the size of their lower socioeconomic peers.

Juel, Biancarosa, Coker, and Deffers (2003) contribute to the discussion of limited vocabulary levels by suggesting that students from low socioeconomic backgrounds know about 6,000 fewer words than their middle-class peers do at the start of schooling. Perhaps more alarming is that according to Stahl and Stahl (2004), the vocabulary gap between children of different socioeconomic status is ever increasing. Restrepo, et al. (2006) note that children raised in poverty tend to score, on average, one standard deviation below the mean on measure of vocabulary, metalinguistic skills, narrative skills, and

sentence complexity than their peers from higher socioeconomic households.

Given the documented differences in vocabulary level of students from low socioeconomic households and their more affluent peers, it became obvious that teaching robust vocabulary to these two groups of students would require differences as well. There is no debate about the importance of teaching students robust vocabulary. Reading researchers have long acknowledged the important role that vocabulary plays in influencing a child's ability to comprehend text (Beck, Perfetti, & McKeown, 1982; Coyne, Simmons, & Kame'enui, 2004; Cunningham & Stanovich, 1997; National Reading Panel Report, 2000; Stahl & Nagy, 2006). Given that vocabulary knowledge plays an important role in reading success, particularly in terms of reading comprehension, it is vital that schools develop instructional strategies to ameliorate the problem of limited vocabulary knowledge in some students.

Students who have limited vocabularies are at-risk of not becoming proficient in reading (Beck, McKeown, & Kucan, 2005; Blanchowicz & Fisher, 2000; Juel & Defies, 2004). The educational implications for students with limited vocabularies may extend beyond reading performance in the classroom and into all facets of a student's life. Beck and McKeown (2002) state that, "Vocabulary is the hallmark of an educated individual." (p.1). Stahl and Nagy (2006) concur that a person's vocabulary level "opens or closes access to sources of information that will affect our future." (p.3). With the established relationship between vocabulary and reading comprehension and the implications of

vocabulary knowledge on a person's future, it is clear that vocabulary instruction should play an important role in schooling (Beck & McKeown, 2001; Juel & Defies, 2004).

The goal of this article is to discuss the research base that delineates what quality robust vocabulary instruction is, in addition to, outlining a study that utilizes this quality robust vocabulary instruction for the benefit of students from low socioeconomic backgrounds. Lastly, implications for classroom practice are outlined.

Instructional Strategies

Unfortunately, there is often little emphasis on vocabulary development in the school curricula (Beck & McKeown, 2005). Historically, wide reading has been viewed as the main way for children to increase their vocabularies (Stahl & Nagy, 2006). However, for students who struggle with reading and for very young students, wide reading is not an efficient or successful way to develop one's vocabulary. Also, it has been suggested that learning vocabulary from context is a very time consuming and inefficient method for vocabulary development (Beck, McKeown, & Kucan, 2002; Juel, Biancarosa, Coker, & Deffes, 2003). One method of vocabulary instruction, which is currently used in schools, is to focus on words to teach from the texts students read. The problem with this method is that the words in commercial anthologies for young readers are often words that students already know and therefore, instructional time should not be spent on these words (Blachowicz & Fisher, 2000). Therefore, other methods have to be explored.

There is a growing consensus that a

good source for identifying words to teach to young readers are trade books that are read aloud to students. Trade books are chosen because they provide text with challenging concepts and higher level vocabulary that is important for comprehension (Beck & McKeown, 2001; Beck, McKeown & Kucan, 2005; Brett, Rothlein, & Hurley, 1996; Coyne, Simmons, & Kame'enui, 2004; Stahl & Nagy, 2006). The results of studies, in which trade books have been used, are promising.

A second issue of vocabulary development deals with what words should be taught. There is some agreement that the words that instructional time should be spent on are words that are of high-utility to mature language users (Beck & McKeown, 2005; Nagy & Scott, 2000; Stahl & Stahl, 2004). Because the time necessary to teach students new vocabulary is so great, it is important that educators choose words that will provide students with the greatest utility for comprehending, speaking, and writing. The question that remains is what are the best ways to instruct students with limited vocabularies, considering the complexity and time involved in learning new vocabulary?

There are several recent studies that provide empirical evidence outlining instructional methods for vocabulary development for young children, at-risk for having limited vocabularies. Beck and McKeown (2005) conducted research with children in Kindergarten and first grade from low-income environments. In the first of the two studies, there were two treatment classes and two control classes at each grade level. The treatment classes received instruction with Text Talk. Text

Talk is an instructional technique developed by the researchers to help young students build both their comprehension and vocabulary skills through the use of read alouds. The results of the first study showed that the instructed groups learned more words than the control groups.

The second study aimed to increase the number of words learned by the instructed groups. The hypothesis was that for children to learn and develop an understanding of sophisticated words, more instruction over a longer time was needed. Therefore, within the Text Talk intervention two treatment groups were established. One treatment was identified as "rich instruction" and the other group was "more rich instruction". Students in the rich instruction group received 6.6 minutes of instruction per word and students in the more rich instruction group received an average of 27.6 minutes of rich instruction per word. The results of the study showed that more instruction was beneficial as the students who received more rich instruction showed vocabulary gains about twice as large as those in the rich instruction group, in both Kindergarten and first grade. Therefore, Beck and McKeown (2005) have suggested that rich instruction with more time spent interacting with words is most beneficial for young children.

Brett, Rothlein, and Hurley (1996) conducted research that compared the effects of three reading conditions on 4th graders' vocabulary acquisition. As with Beck and McKeown's (2005) work, Brett, Rothlein and Hurley (1996) utilized teacher led read alouds in their study. The subjects were either provided with a story and brief

explanations of target words, just presented with the story or in a control group with no exposure to the stories. The results of the study showed that 4th grade students can learn new vocabulary if exposed to a story and brief explanations of target words. Students who were in the treatment group where they heard a story with explanations of the target words learned more of the target words than students in the treatment group where they heard the story without target word explanations or in the control group.

Penno, Wilkinson, and Moore (2002) also investigated the role that explaining vocabulary words while reading aloud played in vocabulary acquisition for young children. This study involved 47 children ranging in age from 5 to 8, in New Zealand. The subjects were either randomly placed in a reading only group or in a treatment group where the book was read with explanations of target words while reading. The results showed that the students in the reading with explanation group made greater gains in vocabulary knowledge of the target words.

Using storybooks with explanations of target words has shown to be effective when teaching vocabulary to students. There are several studies that require active participation on the part of the students in addition to including explanation of target words. Students are required to participate in some way in the vocabulary activities that are focused on teaching target vocabulary words. Requiring active participation from students has proven to be an effective method of teaching higher-level vocabulary.

The results of the studies suggest that

when teaching young children, whose vocabularies are limited, using active involvement, such as questioning, providing brief explanations, pointing, clarifying and repeating, is a useful strategy to promote vocabulary development. Research has suggested instructional practices to increase the vocabulary knowledge of young children, whose vocabularies are limited. The research has focused on using trade books in a read aloud setting with active student participation to increase students' vocabulary knowledge. The National Reading Panel Report (2000) has outlined some implications for practice in teaching vocabulary. These implications include: teaching vocabulary in rich contexts, using repetition and multiple exposures, and utilizing active engagement in learning tasks. Blachowicz and Fisher (2000) also compiled an outline of best instructional practices in teaching vocabulary that includes many of the same implications that the National Reading Panel Report (2000) outlined.

Students can no longer be just passive listeners if educators have the goal of increasing students' vocabulary knowledge (McKeown & Beck, 2004). According to Beck and McKeown (1991), "Students are required to use information by comparing it to, and combining it with, known information toward construction representations of word meaning." (p. 807)

Study

Because the best ways to instruct students in robust vocabulary have already been outlined by previous research and have proven effective, the purpose of this study was to look at the amount of robust

vocabulary instruction that is necessary for students from low socioeconomic backgrounds to make gains in vocabulary knowledge. The research base indicating what type of instruction is beneficial when teaching children robust vocabulary was used to design the instruction used in this study. The study looked at the possibility that traditional amounts of instruction would not be enough for all students to make gains. If that is the case, what can be done to assure that all students, including those from low socioeconomic backgrounds make adequate gains in vocabulary knowledge?

The subjects in this study were first grade students from a large public, suburban school district. The school that the subjects attend is considered economically disadvantaged on the basis of approximately 30% eligible for free or reduced-price lunch. The make-up of the district is predominantly Caucasian. Given the make-up of the district, including the geographical location of the school, it can be assumed that there are significantly more students who would qualify for free and/or reduced-price lunch but families in this school are reluctant to be identified as in need of these services. Many of the subjects came from single parent homes and from families with three or more siblings. Research indicates that this subject set is likely to have a limited vocabulary background.

The study utilized one intact reading class. The class consisted of 21 students. The school utilizes differentiated instruction and this reading class was considered the lower of the two reading classes based on DIBELS and other reading assessments

administered to each child at the beginning of the school year.

Students were taught four, 6-word sets (24 words) of Tier 2 vocabulary words during the study. All students received a minimum of four weeks of instruction and some students, depending on need, received 12 weeks of instruction. The words that were selected for instruction were taken from *Steck-Vaughn Elements of Reading: Vocabulary*. This series was also utilized for the initial week of vocabulary instruction. This research-based vocabulary series teaches Tier 2 words, which are sophisticated vocabulary often used by mature language users. These words are typically above the reading level of young students but are taught orally to increase students' sophisticated vocabularies. Another goal is to aid students' listening and future reading comprehension by teaching students some of the sophisticated vocabulary they may encounter in their future reading.

Prior to the beginning of Round 1 of vocabulary instruction for each set of words, students were given a pretest of the target words. The purpose of the pretest was to determine if the students knew the words prior to instruction. A separate pretest was developed for each set of Tier 2 words. Four question items were developed for each of the target words. Two questions were created around the definition with one question presenting the accurate definition and one question presenting an inaccurate definition. For example, consider the word *amble*, which is one of the target words. Students were presented with the following two questions: *Does amble mean to walk slowly?*

and *Does amble mean to watch something closely?* Additionally, for each word two questions were created around situations with one question supplying an accurate example of each word and one question supplying an inaccurate example of the word. Again, consider the word *amble*. Students were presented with the following two questions: *Would a person amble out of bed in the morning?* and *Should you amble outside during a fire drill?* The purpose of creating four items for each target word was to be able to determine to what degree students understood each word. If a student was able to identify the accurate definition from an inaccurate definition and was able to identify a situation when the target word was used correctly from a situation when a target word was used incorrectly, it was evident that the student understood the word.

Round 1 of instruction for each set of words consisted of four instructional lessons. All students were included in the initial four days of instruction. This instruction was taken from *Steck-Vaughn Elements of Reading: Vocabulary*. Instruction included the following activities: a read-aloud story where the words were used in a story context, introduction of words and student friendly definitions, picture representations of the target words, examples and non-examples of the target words, situational examples, graphic organizers, writing activities and a home connection where students' families were introduced to the target words.

The day following the completion of the first week of instruction, all students were tested on the six taught words in that set. The weekly tests used after each round

of instruction were created in the same manner as the pretest with four items for each target word. Students who met the criteria of learning all six words were excluded from subsequent rounds of instruction. Students who do not meet the criteria of learning all six words were included in a second round of instruction.

Round 2 of instruction used researcher created materials, the instruction lasted three days and involved approximately fifteen minutes of instruction on each of the three days. The instruction in Round 2 included a review of the target words and student friendly definitions, an additional read-aloud story, more examples and non-examples, additional situational examples and brainstorming of words with similar meanings to the target words.

Again the day following the completion of Round 2 of instruction, students who received the instruction were administered a test of the taught vocabulary words. Students who mastered all six of the words were excluded from any further instruction. Students who did not master all six of the words were included in Round 3 of instruction.

Round 3 of instruction again used researcher created materials and lasted three days with approximately fifteen minutes of instruction on each of the three days. The instruction in Round 3 included a third read-aloud, the completion of graphic organizers for each of the target words and a final review of the student friendly definitions.

The day following the completion of Round 3 of instruction, students who received the instruction were administered the final weekly test of the taught vocab-

ulary words. Regardless if all the taught words were mastered following Round 3, instruction did not continue for that set of words. All students were then included in Round 1 of instruction for the next set of six target words.

The research question asked if additional vocabulary instruction for students who do not master all the taught words after one week of instruction was beneficial. To address the question, student's weekly assessment results were analyzed. Students who mastered the taught words after one week of instruction were not considered. Scores for students who did not master all the taught words in one week of instruction were considered and studied to determine if additional instruction resulted in these students scoring higher on subsequent weekly vocabulary tests. An analysis of patterns of achievement for each student, not mastering the words after one week of instruction, was also considered.

As indicated in *Table 1*, the average number of words mastered by students increased each week that additional instruction was provided. The two exceptions to this pattern occurred between week 2 (4.24) and week 3 (4.00) with Set 2 words and between week 1 (4.00) and week 2 (4.00) with Set 4 words. In the case of the Set 2 words, although students in the NM group mastered fewer words on the week 3 assessment, they still improved in the number of words they mastered overall from weeks 1 to 3. In week 1, students in the NM group mastered an average of 3.60 words and by the completion of instruction in week 3; the NM group had mastered, on average, 4.00 words. In the instance of

Table 1: Average number of words mastered over three weeks of instruction

Word set	week1	week2	week3
1	All (n=21) 3.67	All (n=19) 4.84 NM (n= 11) 4.00	All (n=11) 4.55 NM (n=6) 3.34
	NM (n=19) 3.42		
2	All (n=21) 3.71	All (n=20) 4.50 NM (n=17) 4.24	All (n=17) 4.00 NM (n=16) 3.88
	NM (n=20) 3.60		
3	All (n=21) 4.76	All (n=14) 4.57 NM (n=11) 4.18	All (n=11) 4.27 NM (n=7) 3.29
	NM (n=14) 4.14		
4	All (n=21) 4.67	All (n=14) 4.00 NM (n=13) 3.85	All (n=13) 5.08 NM (n= 9) 4.67
	NM (n=14) 4.00		

*NM indicates the group of student who did not master all the taught words in a given week

Set 4 words, students in the NM group mastered the same number of words between weeks 1 and 2. Again, across the three weeks of instruction, students in the NM group, on average, increased the number of words mastered from 4.00 to 5.08.

Even with the inclusion of the two instances when students average mastery did not increase across two weeks, students' average mastery of words from weeks 1 to 3 consistently increased indicating that additional vocabulary instruction was beneficial for this group of students. Consider Set 1. During the first week of instruction, students in the NM group mastered, on average, 3.42 words. After being included in a second week of instruction, the same group of students mastered, on average, 4.84 words. When considering the students who did not master all the target words after the second week of instruction the mastery level still increased to an average of 4.00 words. These students were then included in a third week of instruction that

resulted in an increase of average word mastery to 4.55.

Another indication that additional instruction was beneficial is highlighted in the number of students included weekly in instruction. All 21 students were included in the first week of instruction for each set of words. The students who did not master all the words are considered to be part of the NM group and are included in additional instruction. This pattern continues for three weeks. *Table 1* indicates that fewer students required additional instruction over the weeks. Consider Set 3. In Set 3 all 21 students were included in the first week of instruction. Out of the 21 students, seven mastered all the target words after one week of instruction and 14 students were included in week 2 of instruction. Following week 2 of instruction, three additional students mastered all the target words and 11 students were included in a third week of instruction. Following week 3 of instruction, four additional students mastered all the target

words. This pattern of increased mastery is consistent for each set of target words indicating that additional instruction was beneficial for this group of students because it allowed more students to master all the target words.

Implications for classroom practice

Based on the findings of this study, in addition to other research implicating the importance of providing quality vocabulary instruction, it is crucial that amount of instruction is considered. The conventional wisdom that all students do not learn in the same way may have limited the notion that some students need more of the same. In the case of the current study the same means quality, interactive instruction and more means additional instruction.

Educators must be prepared to provide additional instruction when initial instruction doesn't allow all students to reach mastery. The benefit of providing additional instruction can increase students' vocabulary gains and the probability of closing the gap between vocabulary levels of students from varying socioeconomic levels will be increased (Biemiller, 2004; Hargrave & Senechal, 2000; Juel, Biancarosa, Coker, & Deffes, 2003; Stahl & Stahl, 2004).

The issue of practicality and feasibility of providing this type of instruction in a typical classroom arises. The vocabulary instruction provided throughout the course of this study was implemented during the traditional language arts instructional time. Each lesson provided took 10-15 minutes of instructional time. Given the results of this study and prior research indicating the importance of providing students with quality, robust vocabulary instruction, the

minimal time devoted to this instruction is quite feasible and practical.

References

- Beck, I. & McKeown, M. (1991). In R. Barr, M. L. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of Reading Research* (Vol. 2, pp. 789-814). New York: Longman.
- Beck, I. L., & McKeown, M. G. (2001). Text Talk: Capturing the benefits of read-aloud experiences for young children. *The Reading Teacher*, 55(1), 10-20.
- Beck, I. L., & McKeown, M. G. (in press). Increasing Young Low-Income Children's Oral Vocabulary Repertoires through Rich and Focused Instruction. *Elementary School Journal*.
- Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing Words to Life*. New York: The Guilford Press.
- Beck, I. L., McKeown, M. G. & Kucan, L. (2005). Choosing Words to Teach. In Hiebert, E. H., & Kamil, M. L. *Teaching and Learning Vocabulary*. Mahwah: NJ: Erlbaum.
- Beck, I. L., Perfetti, C. A., & McKeown, M. G. (1982). The effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational Psychology*, 74, 506-521.
- Blachowicz, C. L. Z. & Fisher, P. (2000). Vocabulary Processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson & R. Barr (eds.) *Handbook of Reading Research* (Vol. III, pp. 503-523). Mahwah, NJ: Erlbaum.
- Biemiller, A. (2004). Teaching Vocabulary in the Primary Grades. In Baumann, J. F., & Kame'enui, E. J. *Vocabulary Instruction: Research to Practice*. New York.
- Biemiller, A. (2005). Size and Sequence in Vocabulary Development. In Hiebert, E. H., & Kamil, M. L. *Teaching and Learning Vocabulary*. Mahwah: NJ.
- Biemiller, A. & Slonim, N. (2001). Estimating root word vocabulary growth in normative and advantaged populations: Evidence for a common sequence of vocabulary acquisition. *Journal of Educational Psychology*, 93, 498-520.

- Blachowicz, C. L. Z., & Fisher, P. (2000). Vocabulary Processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson, & R. Barr (eds.) *Handbook of Reading Research* (Vol. III, pp.503-523). Mahwah, NJ: Erlbaum Associates.
- Brett, A., Rothlein, L., & Hurley, M. (1996). Vocabulary Acquisition from Listening to Stories and Explanations of Target Words. *The Elementary School Journal*, 96(4), 415-422.
- Coyne, M. D., Simmons, D. C., & Kame'enui, E. J. (2004). Vocabulary Instruction for Young Children At-Risk of Experiencing Reading Difficulties. In Baumann, J. F., & Kame'enui, E. J. *Vocabulary Instruction: Research to Practice*. New York: Guilford Press.
- Coyne, M. D., Simmons, D. C., Kame'enui, E. J. & Stoolmiller, M. (2004). Teaching Vocabulary During Shared Storybook Readings: An Examination of Differential Effects. *Exceptionality*, 12(3), 145-162.
- Cunningham, A., & Stanovich, K. (1997). Early reading acquisition and its relation to reading experience and ability 10 years later. *Developmental Psychology*, 33, 934-945.
- Hargrave, A. C., & Senechal, M. (2000). A book reading intervention with preschool children who have limited vocabularies: the benefits of regular reading and dialogic reading. *Early Childhood Reading Quarterly*, 15(1), 75-90.
- Hart, B., & Risley, T. R. (1995). Meaningful Differences in the Everyday Experiences of Young American Children. Baltimore, MD: Paul H. Brookes.
- Juel, C., Biancarosa, G., Coker, D., & Deffes, R. (2003). Walking with Rosie: A Cautionary Tale of Early Reading Instruction. *Educational Leadership*, 12-18.
- Juel, C., & Defies, R. (2004). Making Words Stick. *Educational Leadership*, 61(6), 30-34.
- McKeown, M. G. & Beck, I. L. (2004). Direct and Rich Vocabulary Instruction. In Baumann, J. F., & Kame'enui, E. J. *Vocabulary Instruction: Research to Practice*. New York: Guilford Press.
- Nagy, W. (2005). Why Vocabulary Instruction Needs to Be Long-Term and Comprehensive. In Hiebert, E. H., & Kamil, M. L. *Teaching and Learning Vocabulary*. Mahwah: NJ.
- Nagy, W. E. & Scott, J. A. (2000). Vocabulary Processes. In M. L. Kamil, P. B. Mosenthal, P. D. Pearson & R. Barr (eds.) *Handbook of Reading Research* (Vol. III, pp. 269-284). Mahwah: NJ: Erlbaum.
- National Institute of Child Health and Human Development. (2000). Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- Penno, J. F., Wilkinson, I. A., & Moore, D. W. (2002). Vocabulary Acquisition from Teacher Explanation and Repeated Listening to Stories: Do They Overcome the Matthew Effect? *Journal of Educational Psychology*, 94(1), 23-33.
- Restrepo, M. A., Schwanenflugel, P. J., Blake, J., Neuhauser-Pritchett, S., Cramer, S.E., & Ruston, H. P. (2006). Performance on the PPVT-III and the EVT: Applicability of the Measures With African-American and European American Preschool Children. *Language, Speech, and Hearing Services in Schools*, 37, 17-27.
- Senechal, M., Thomas, E., & Monker, J. (1995). Individual Differences in 4-Year-Old Children's Acquisition of Vocabulary During Storybook Reading. *Journal of Educational Psychology*, 87(2), 218-229.
- Stahl, S. A., & Nagy, W. E. (2006). *Teaching Word Meanings*. Mahwah, NJ: Erlbaum Associates.
- Stahl, S. A. & Stahl, K. A. D. (2004). Word Wizards All! In Baumann, J. F., & Kame'enui, E. J. *Vocabulary Instruction: Research to Practice*. New York: Guilford Press.